

- Claim 19 (new): A molecular regulatory circuit delivered into a cell for activation of a gene of interest by a single transient stress comprising a gene for a transcription factor and the gene of interest, whereby the transcription factor is first expressed in response to the transient stress and thereafter activates transcription of the gene of interest and its own expression.
- Claim 20 (new): A molecular regulatory circuit delivered into a cell for activation of a gene of interest by a single transient stress and a second stimulus comprising a gene for a transcription factor and the gene of interest, whereby the transcription factor is first expressed in response to the transient stress, acquires activity in the presence of the second stimulus and thereafter activates transcription of the gene of interest and its own expression.
- Claim 21 (new): A method for activation of a gene of interest in a cell by a transient stress, comprising delivering into the cell the molecular regulatory circuit of claim 19 and subjecting the cell to the transient stress resulting in expression of the transcription factor of the molecular regulatory circuit, the transcription factor activating transcription of the gene of interest and its own expression, thereby achieving sustained expression of the gene of interest.
- Claim 22 (new): A method for activation of a gene of interest in a cell by a transient stress and a second stimulus, comprising delivering into the cell the molecular regulatory circuit of claim 20 and subjecting the cell to the second stimulus and the transient stress resulting in expression of the transcription factor of the molecular regulatory circuit, the transcription factor activating transcription of the gene of interest and its own expression, thereby achieving sustained expression of the gene of interest.
- Claim 23 (new): The method of claim 22 further comprising the step of subsequently withdrawing the second stimulus, thereby achieving reduction of activity or inactivation of the gene of interest.

- Claim 24 (new): A nucleic acid delivered into a cell comprising a gene for a transcription factor that is operably linked to a promoter activatable by a stress and by the transcription factor.
- Claim 25 (new): A nucleic acid delivered into a cell comprising a first gene for a transcription factor that is operably linked to a promoter activatable by a stress and a second gene for the same transcription factor that is operably linked to a promoter activatable by the transcription factor.
- Claim 26 (new): A nucleic acid delivered into a cell comprising a gene for a transcription factor, the transcription factor being first expressed in response to a stress and thereafter activating its own expression.
- Claim 27 (new): The nucleic acid of any of claims 24-26, wherein the transcription factor is selected from the group consisting of a mutated heat shock transcription factor, a chimeric transcription factor, a constitutively active transcription factor and a transcription factor active in the presence of a second stimulus other than a stress.

REMARKS

In response to a Notice of Non-Compliant Amendment (37 CFR 1.121), Applicant provides in the present amendment a complete listing of all claims (4.A.) and identifies the proper status of each claim (4.C.).

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Respectfully Submitted,



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